

## **Gali Prag - Curriculum Vitae**

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### **EDUCATION AND SERVICE**

Born and educated in [Kibbutz Ein Harod Meuhad](#), Israel.

1984-1985 Pre military service year, leader in the youth organization Hamahanot

Hao'lim Neve Shaannan Haifa.

1985-1990 IDF: officer course of the navy, duty as a navy officer, (reserve duty as a navy lieutenant colonel).

1993-1995 B.Sc., studies in Biology, Hebrew University of Jerusalem

1996-1997 M.Sc., Biotechnology studies, Hebrew University of Jerusalem.

1997-2001 [Ph.D. with Prof. Amos Oppenheim, Hebrew University-Hadassha Medical School. Entitled, 'Structure function analysis of TIM-barrel proteins: The catalytic mechanism of chitinolytic enzymes'](#)

1999 Short term EMBO fellowship at IMBB-FORT Heraklion.

2000 Short term EMBO fellowship at EMBL outstation, Hamburg (DESY).

Since December 2001, Post doctoral fellowship at the NIH with Dr. James Hurley.

### **HONORS, AWARDS AND FELLOWSHIPS**

1996 Rector award of the Hebrew University for excellence for MSc. students.

1996 Kibo prize of the Hebrew University.

1996 Herzfield A. prize of the Hebrew University.

1996 Karpels B. prize of the Hebrew University.

1996 Gordon A.D. prize of the Hebrew University.

1997 Karpels B. prize of the Hebrew University.

1999 Short term European Molecular Biology Organization (EMBO) fellowship.

2000 Short term European Molecular Biology Organization (EMBO) fellowship.

2000 Rector award of the Hebrew University for excellence for Ph.D. students.

### **TEACHING AT THE HEBREW UNIVERSITY**

1. Computational analysis of macromolecules in Biotechnology (head).
2. Genetic Engineering in Biotechnology (assistant).

### **SELECTED MEETINGS AND ABSTRACTS**

#### *Invited lectures and seminars*

#### **1997**

1. “Function-structure relationships of TIM-barrel proteins: The active site of Chitobiase”  
2<sup>nd</sup> meeting on the Biotechnology of TIM-barrel proteins, Heraklion, Greece.

#### **1999**

1. “Structure - function studies of chitinase A”. 4<sup>th</sup> Sectorial Meeting on the Biotech. of TIM-barrel proteins Antwerpen, Belgium.
2. “Genetic, biochemical and structural studies of the ChbF, a putative *E.coli* phospho-chitobiase” 5<sup>th</sup> Sectorial meeting on the Biotech. of TIM-barrel proteins. Meeting on the Biotech. of TIM-barrel proteins, Santorini Greece.

#### **2001**

1. “Conservation of structural elements and catalytic mechanism of chitinolytic enzymes”  
European society of chitin and chitin enzymology, Ancona Italy.

#### **2002**

1. “Structure - function analysis of TIM-barrel proteins: The catalytic mechanism of chitinolytic enzymes”. Weizmann Institute, Rehovot, Israel.

#### **2003**

1. “Recognition and binding of monoubiquitin by CUE domain” 31st Mid-Atlantic Macromolecular Crystallography Meeting, Duke University, NC.

2. “Structural insight into CUE:Ubiquitin complex: Recognition and binding of monoubiquitin” Weizmann Institute, Rehovot, Israel.
3. “The structure of CUE:Ubiquitin complex elucidates the discrimination between poly- and mono-Ubiquitin” The Hebrew University, Jerusalem, Israel.
4. “Recognition and binding of monoubiquitin by CUE domains”.  
Technion – Israeli Institute of Technology, Haifa, Israel.
5. “Mechanism of recognition and binding of mono-ubiquitin by CUE domain”. Gordon Conference (GRC) of Molecular Membrane Biology, Proctor Academy NH.

#### **2004**

1. “Conservation of structural elements and catalytic mechanism of chitinolytic enzymes”. Cell Biochemistry and Biology, NIDDK, NIH, Bethesda, MD.

#### **2005**

1. “Structural mechanisms for mono-ubiquitin recognition in the endocytic pathway”  
Technion – Israeli Institute of Technology, Haifa, Israel.
2. “Mechanisms of ubiquitin recognition in the endocytic pathway” The Hebrew University, Jerusalem, Israel.
3. “Structural mechanisms for monoubiquitin recognition in the endocytic pathway”  
Weizmann Institute, Rehovot, Israel.
4. “Structural mechanisms for monoubiquitin recognition” The 35th Mid-Atlantic Macromolecular Crystallography Meeting, Bethesda MD.

5. “Structural mechanism for ubiquitinated cargo recognition” Protein Dynamics & Signaling NCI -Frederick MD.

***Selected Posters***

1997 “The evolution of DNA binding regulatory genes coding for repressor and activator proteins in prokaryotes” Analiza '97- The Annual meeting of the Israel Society for Biochemistry and Molecular Biology. Tel Aviv, Israel.

1998 “Mutations in the bacterial chitobiase active site provides insight into catalytic mechanism and structural understanding of Tay Sachs disease”  
"Genomics", Victor Rothschild Memorial Symposia, 7th Jerusalem.

2003 “Mechanism of recognition and binding of monoubiquitin by Vps9-CUE domain” Ubiquitin & Ubiquitin-like Modifications in health & disease conference. NIH, Bethesda MD.

2003 “Mechanism of recognition and binding of mono-ubiquitin by CUE domain”. Gordon Conference (GRC) of Molecular Membrane Biology, Proctor Academy NH.

2004 “Recognition of monoubiquitin by Vps9-CUE domain” 2nd International Conference Ubiquitin, Ubiquitin-like Proteins & Cancer, Md Anderson Houston TX.

2005 “Structural mechanism for ubiquitinated cargo recognition” Gordon Conference (GRC) of Molecular Membrane Biology, Proctor Academy NH.

## PUBLICATION LIST

1. **Prag G**, Greenberg S, Oppenheim AB.

Structural principles of prokaryotic gene regulatory proteins and the evolution of repressors and gene activators.

[\*Mol Microbiol.\* \(1997\) 26, 619.](#)

2. Giladi H, Koby S, **Prag G**, Engelhorn M, Geiselmann J, Oppenheim AB.

Participation of IHF and a distant UP element in the stimulation of the phage lambda PL promoter.

[\*Mol Microbiol.\* \(1998\) 30, 443.](#)

3. **Prag G**, Papanikolau Y, Tavlas G, Vorgias CE, Petratos K, Oppenheim AB.

Structures of chitobiase mutants complexed with the substrate Di-N-acetyl-d-glucosamine: the catalytic role of the conserved acidic pair, aspartate 539 and glutamate 540.

[\*J. Mol Biol.\* \(2000\) 300, 611.](#)

4. Papanikolau Y, **Prag G**, Tavlas G, Vorgias CE, Oppenheim AB, Petratos K.

High resolution structural analyses of mutant chitinase A complexes with substrates provide new insight into the mechanism of catalysis.

[\*Biochemistry.\* \(2001\) 40, 11338.](#)

5. **Prag G** and Oppenheim AB. Conservation of structural elements and catalytic mechanism in the chitinolytic enzymes from *Serratia marcescens*.

[\*Chitin Enzymology.\* \(2001\) 3, 351.](#)

6. Shih SC, **Prag G**, Francis SA, Sutanto MA, Hurley JH, Hicke L.

A ubiquitin-binding motif required for intramolecular monoubiquitylation, the CUE domain.

[\*EMBO J.\* \(2003\) 22, 1273.](#)

7. **Prag G**, Misra S, Jones EA, Ghirlando R, Davies BA, Horazdovsky BF, Hurley JH.  
Mechanism of ubiquitin recognition by the CUE domain of Vps9p.  
[Cell. \(2003\) 113, 609.](#)

\* Highlighted with one other paper in a preview, *Cell* (2003) 113, 554.

\* *Reviewed in* How Ubiquitin Takes Its Cue [APS SCIENCE \(2003\) 7, 68.](#)

\* [Evaluated by Faculty of 1000](#)

8. Hierro A, Sun J, Rusnak AS, Kim J, **Prag G**, Emr SD, Hurley JH  
Structure of the ESCRT-II endosomal trafficking complex  
[Nature \(2004\) 431, 221.](#)

\* [Evaluated by Faculty of 1000](#)

9. **Prag G**, Lee S, Mattera R, Arighi CA, Beach BM, Bonifacino JS and Hurley JH.  
Structural mechanism for ubiquitinated cargo recognition by the GGA proteins  
[Proc. Natl. Acad. Sci. USA \(2005\) 102, 2334.](#)